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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,823	05/11/2001	David Long	50277-1561	6447

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EXAMINER

ALI, SYED J

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,823

Applicant(s)

LONG ET AL.

Examiner

Syed J. Ali

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/28/05; 4/14/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 6, 2005 has been entered. Claims 1-18 are presented for examination.

2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections - 35 USC § 102

3. **Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Rich et al. (USPN 6,457,065) (hereinafter Rich).**

4. As per claim 1, Rich teaches the invention as claimed, including a method for performing operations in an electronic file system, the method comprising the steps of:

receiving a command to perform one or more file system operations (col. 7 lines 56-59; col. 17 lines 51-57; col. 19 lines 30-33; col. 21 lines 51-55);

in response to said command, performing a plurality of operations including said one or more file system operations (col. 7 lines 56-59; col. 17 lines 51-57; col. 19 lines 30-33; col. 21 lines 51-55);

wherein the step of performing the plurality of operations includes:

performing a first subset of said plurality of operations as part of a first transaction (col. 7 line 53 - col. 8 line 18; col. 8 line 63 - col. 9 line 40); and

performing a second subset of said plurality of operations as part of a second transaction that is nested in said first transaction (col. 7 line 53 - col. 8 line 18; col. 8 line 63 - col. 9 line 40);

wherein each of said one or more file system operations is included in at least one of the first subset of said plurality of operations and the second subset of said plurality of operations (col. 8 lines 47-55; col. 9 lines 3-12; col. 21 lines 51-55).

5. As per claim 2, Rich teaches the invention as claimed, including the method of claim 1 wherein the step of performing the plurality of operations further includes the step of performing a third subset of said plurality of operations as part of a third transaction that is nested in said second transaction (col. 7 line 53 - col. 8 line 18; col. 8 line 63 - col. 9 line 40).

6. As per claim 3, Rich teaches the invention as claimed, including the method of claim 1 wherein the second subset of operations are operations that are triggered by an operation that belongs to said first subset of operations (col. 8 line 63 - col. 9 line 40; col. 10 line 42 - col. 11 line 14).

7. As per claim 4, Rich teaches the invention as claimed, including the method of claim 1 wherein:

Art Unit: 2195

the step of receiving the command is performed by an entity that resides external to a database server (col. 7 line 53 - col. 8 line 18; col. 11 lines 21-35; col. 17 lines 51-55); and

the step of performing said plurality of operations includes said entity sending database commands to said database server (col. 7 line 53 - col. 8 line 18; col. 11 lines 21-35; col. 17 lines 51-55; col. 21 lines 51-55).

8. As per claim 5, Rich teaches the invention as claimed, including the method of claim 4 wherein the step of performing said second subset includes:

the entity sending to the database server a savepoint command for the database server to establish a savepoint (col. 7 line 53 - col. 8 line 18; col. 11 lines 49-67; col. 12 lines 27-41); and

after the entity sends to the database server a savepoint command, the entity sending to the database server commands for performing said second subset of said plurality of operations (col. 7 line 53 - col. 8 line 18; col. 11 lines 49-67; col. 12 lines 27-41).

9. As per claim 6, Rich teaches the invention as claimed, including the method of claim 5 further comprising the entity responding to a failure of an operation in said second subset by sending to the database server a command to roll back to said savepoint (col. 7 line 53 - col. 8 line 18; col. 11 lines 49-67; col. 12 lines 27-41).

10. As per claim 7, Rich teaches the invention as claimed, including the method of claim 4 further comprising the entity maintaining a transaction list by performing the steps of:

Art Unit: 2195

adding an entry to the tail of the transaction list when the entity sends a savepoint command to the database server to start a nested transaction (col. 7 line 53 - col. 8 line 18; col. 11 lines 49-67; col. 12 lines 27-41); and

when an operation fails, determining the savepoint to roll back to based on the entry at the tail of the transaction list (col. 7 line 53 - col. 8 line 18; col. 11 lines 49-67; col. 12 lines 27-41); and

removing the entry from the tail of the transaction list when the nested transaction fails or completes successfully (col. 7 line 53 - col. 8 line 18; col. 11 lines 49-67; col. 12 lines 27-41).

11. As per claim 8, Rich teaches the invention as claimed, including the method of claim 3 wherein:

the one or more file system operations include an operation on a folder (col. 9 line 41 - col. 10 line 41); and

the second subset of operations includes operations associated with one or more documents within the folder (col. 9 line 41 - col. 10 line 41).

12. As per claim 9, Rich teaches the invention as claimed, including the method of claim 4 further comprising the steps of:

the entity determining whether all operations that are to be performed as a nested transaction are read only (col. 13 lines 4-28; col. 15 lines 1-46; col. 16 line 56 - col. 17 line 3);

Art Unit: 2195

if all operations that are to be performed as the nested transaction are read only, then sending commands to perform the operations without first sending a command to establish a savepoint (col. 13 lines 4-28; col. 15 lines 1-46; col. 16 line 56 - col. 17 line 3); and

if all operations that are to be performed as the nested transaction are not read only, then sending a command to establish a savepoint prior to sending commands to perform the operations (col. 13 lines 4-28; col. 15 lines 1-46; col. 16 line 56 - col. 17 line 3).

13. As per claims 10-18, Rich teaches the invention as claimed, including a computer-readable medium carrying instructions for performing the method of claims 1-9, respectively (col. 5 lines 28-58).

Response to Arguments

14. **Applicants' arguments filed June 6, 2005 have been fully considered but they are not persuasive.**

15. Applicants argue that "*Rich does not describe the performance of file system operations.*" As support for this argument, Applicants suggest that Rich is concerned with remote object replication, wherein the objects are not necessarily elements of a file system, e.g. a file or folder.

16. Examiner respectfully disagrees with Applicants' characterization of Rich. Rich is concerned with replication of remote objects on a persistent store, where Rich explicitly indicates that the persistent store may be a file system. Objects are first updated internally, without updating the persistent store (col. 7 lines 66 - col. 8 line 4). Then, the user decides whether or

Art Unit: 2195

not to commit the changes, wherein the updated version is then copied to the persistent store if the update is committed (col. 8 lines 4-8). When the changes are committed to the persistent store, which may be a file system, there *must* be a file system operation to effect the changes. There is no way that the file system may be updated without some sort of a write to the file system. It is granted that Rich does not use the specific language of “file system operation”; the file system operation is inherent in the step of committing the transaction.

17. Applicants argue, “*Rich does not describe that file system operations are included in nested transactions.*” Applicants indicate that the manipulation of objects does not necessarily correspond to file system operations, and the transactions of Rich do not necessarily include file system operations.

18. First, there is nothing to indicate that the file system is not maintained as a set of objects. It is conceivable that folders in a file system may be defined and treated as a set of objects. Secondly, Applicants have admitted prior art that shows file system operations may be implemented in a transactional approach (Specification, pg. 2 lines 19-24).

19. Applicants argue, “*Rich does not describe, either explicitly or implicitly, the feature of... receiving a command to perform one or more file system operations.*”

20. Examiner respectfully disagrees. Rich describes a transaction as a “logical group of changes to one or more objects that will be performed in an atomic manner” (col. 7 lines 56-59). The changes are made to the object internally, before permanently updating the persistent storage. The committing of the transaction is not performed until the user indicates a desire to do

Art Unit: 2195

so, i.e. a command is given to commit the transaction, which may be a file system operation (col. 8 lines 4-8, “The user eventually decides whether to permanently commit the changes”).

21. Applicants argue that *“Rich fails to teach performing a first subset of the plurality of operations as part of a first transaction and performing a second subset of the plurality of operations as part of a second transaction that is nested in the first transaction.”*

22. Examiner has provided citations to many portions of Rich in an effort to point out the multiple sections therein that discuss a nested transactional approach. Rich describes a transaction as being a set of operations that are performed atomically, i.e. all of the operations are performed or the transaction is discarded. The whole set of operations is considered “the plurality of operations”. Rich goes on to describe a transaction as containing a set of nested subtransactions, which are the “second subset of the plurality of operations” (col. 8 lines 47-55). The operations that are part of the main transaction are the “first subset of the plurality of operations”.

Art Unit: 2195

Conclusion

23. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (571) 272-3769. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2195

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali
August 17, 2005



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